

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

<p>ART UNIT: 2853</p> <p>EXAMINER: Laura E. Martin</p> <p>APPELLANTS: Paul Bruinsma et al.</p> <p>SERIAL NO.: 10/825,736</p> <p>FILED: April 15, 2004</p> <p>CONF. NO.: 8822</p> <p>FOR: INK-JET PRINTING SYSTEM WITH REDUCED NOZZLE CLOGGING</p> <p>DOCKET NO.: 200309260-1</p>	<p style="text-align: center;"><u>REPLY BRIEF</u></p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"><p style="text-align: center;"><u>CERTIFICATE OF MAILING</u> <u>UNDER 37 C.F.R. § 1.8</u></p><p>DATE OF DEPOSIT: September 8, 2010</p><p>I hereby certify that this paper or fee (along with any paper or fee referred to as being attached or enclosed) is being submitted on the date indicated above via:</p><p><input checked="" type="checkbox"/> EFS Web</p><p><input type="checkbox"/> facsimile to _____</p><p><input type="checkbox"/> the United States Postal Service with sufficient postage as first class mail addressed to: Mail Stop _____, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. /brendawiseman/</p><p style="text-align: center;">_____ Brenda Wiseman</p></div>
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APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Appellants submit this Reply Brief in response to the Examiner's Answer mailed on July 8, 2010, and in connection with their Appeal Brief filed on March 31, 2010 in the above-identified application.

STATUS OF CLAIMS

Claims 1-7, 9-22, and 24-30 remain pending. Claims 8 and 23 have been canceled. Thus, the claims on appeal in this application are claims 1-7, 9-22, and 24-30, which constitute all of the claims presently pending for consideration.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for review are:

(1) whether claims 1-3, 5-7, 9-18, 20-22, and 24-30 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,958,121 (hereinafter “Lin”) in view of U.S. Patent No. 5,624,484 (hereinafter “Takahashi”); and

(2) whether claims 4 and 19 are unpatentable under 35 U.S.C. § 103(a) over Lin and Takahashi, and further in view of U.S. Patent No. 6,328,413 (hereinafter “Rutland”).

ARGUMENT

The arguments set forth in this Reply Brief are provided to supplement Appellants' arguments set forth in the Appeal Brief, particularly in response to Examiner's arguments made in the Examiner's Answer issued July 8, 2010 (hereinafter "the Answer"). Any arguments presented by Appellants in the Appeal Brief but not repeated here are not to be construed as having been disavowed or withdrawn by Appellants absent an explicit statement to the contrary.

The rejection of claims 1-3, 5-7, 9-18, 20-22, and 24-30 under 35 U.S.C. § 103(a) over Lin in view of Takahashi

In the Appeal Brief, Appellants argued that Lin provides no clear teaching of the use of an anionic dye of one weight percent concentration with an anionic dispersing agent present in another weight percent concentration. To briefly summarize those arguments, Lin names available colorants using the disjunctive language "dye or pigment" (*emphasis added*), and subsequently lists possible stabilizers for those colorants. Based on such language, one skilled in the art would assume that each of the listed stabilizers would be coupled with the one colorant type for which the stabilizer is appropriate (i.e. not necessarily to both types). Therefore, where a dispersant is listed as a possible stabilizer, one would not conventionally use the dispersant with colorants known to not require dispersants (e.g. dyes or surface-functionalized pigments).

In the Answer, the Examiner has again pointed to the language beginning at column 21, line 11 in Lin, and asserts that Lin definitively links an anionic dye with an anionic dispersant as recited in Appellants' claims. Answer, page 11. The Examiner also points to column 18, lines 24-31 as allegedly supporting this finding. Appellants submit that the cited language cannot be read as reciting such a combination, as at column 21, line 11, Lin recites candidates for both

components in the alternative (i.e. “dye or pigment” and “dispersants or stabilizing agents”). (*Emphasis added.*) Lin never specifically puts dyes together with dispersants, which would be required for one skilled in the art to take the view that they should be put together. Such an unusual combination would require more than alternative discussion of colorants that can be used (as is the case in the present application where much discussion is presented about combining dyes with dispersants, etc., which is counter-intuitive). In view of this language and the knowledge in the art, there is no basis for the unconventional pairing of an anionic dye of one weight percent concentration with an anionic dispersing agent present in another weight percent concentration. In fact, the conventional understanding is supported in view of the express mention in Lin of a “dispersing agent, or a dispersant” only in association with pigment particles. Column 11, 36-48; see also column 18, 14-17. It seems that the Examiner is using imprecise drafting in Lin to maintain a rejection that really doesn’t teach what the Examiner claims Lin teaches, i.e. Lin describes dyes or pigments generally at one location and then discusses dispersants in another location without first clarifying that it really only applies only to the pigments. One skilled in the art would understand this distinction without a specific statement to contrary.

Appellants also argued that the language at column 18, lines 44-48 does not suggest that the anionic dyes listed thereafter are to be combined with anionic stabilizing agents. The language in fact states that “[a]ny suitable dye or mixture of dyes that is compatible with the other ink ingredients can be used.” Rather the phrase “the other ink ingredients” as used in Lin should properly be read as advising compatibility of the dye generally with additives typically added to dye inks. No specific statement puts anionic dyes with materials traditionally used for pigment-based inks.

In the Answer, the Examiner repeats the assertion that “[i]t would obvious that [the listed anionic dyes] is referring to the second ink as the first ink contains specifically anionic dyes and the third and fourth inks contain pigments.” Again, Appellants point out that Lin discloses a composition with two inks. The “inks” to which the Examiner appears to be referring are actually a list of possible colorants for the first ink of the composition. See e.g. column 11, lines 13-31. As such, Appellants again submit that the inclusion of anionic inks in the list beginning at column 18, line 45 does not raise the assumption argued by the Examiner.

In the Appeal Brief, Appellants asserted that the present claims are also patentable over this combination of Lin and Takahashi because Takahashi fails to remedy the deficiencies of Lin. Page 17. Appellants argued further that Takahashi supports the Appellants’ assertion that one skilled in the art would typically not use dispersants with dyes, but rather would use dispersants with pigments. Appellants noted that in Takahashi, dispersing agents are always tied directly to the use of a pigment in the ink and not to the use of an anionic dye as required by the claims at issue. In the Answer, the Examiner argues that Lin reads on the language of claims 1 and 16, and Takahashi is only cited to provide an alleged teaching of overprinting and underprinting of a fixer composition. Answer, page 12, paragraph 4. Appellants have noted the Examiner’s asserted basis for citing Takahashi. Appellants maintain however that, for the reasons above and those presented in the Appeal Brief, Lin fails to teach or suggest the elements of claims 1 and 16. Appellants also maintain that, for the reasons above and those presented in the Appeal Brief, Takahashi fails to remedy these deficiencies so as to present a *prima facie* case of obviousness against Appellants’ claims.

In light of the above, Appellants maintain that claims 1 and 16 are patentable over the combination of Lin and Takahashi, as these references fail to teach every element of these claims

in the arrangement required by the claims. Therefore, Appellants respectfully submit that claims 1-3, 5-7, 9-18, 20-22, and 24-30 are allowable over the cited references and urge withdrawal of the rejection.

The rejection of claims 4 and 19 over Lin and Takahashi in view of Rutland

In the Appeal Brief, Appellants argued that not only does Rutland not remedy the missing elements of the combination of Takahashi and Lin with respect to the presence of an anionic dye and an anionic dispersing agent, Rutland also does not teach a system with all of the claim limitations required by claims 4 and 19. In fact, Rutland is more properly considered to teach away from such a combination. Appeal Brief, page 18, paragraph 3. In particular, Rutland teaches away from the use of ink-jet nozzles which cause cross-contamination, particularly when a “fixer” solution is present. *Id.*

In the Answer, the Examiner argues that Rutland “discloses multiple means” for preventing nozzle clogging during inactivity. Answer, page 13, paragraph 2. Appellants note, however, that Rutland is directed to minimizing clogging by configuring print nozzles or cartridges to employ a bidirectional spitting scheme, so as to eliminate or avoid cross-contamination. The existence of multiple approaches does not in itself render all such approaches mutually obvious, particularly when the approaches are divergent. In this case, Rutland teaches a structural approach that is divergent from the composition-based approach of the present claims. As Appellants have discussed above, the cited combination of references would not guide one skilled in the art to the arrangement recited in Appellants’ claims. Therefore, claims 4 and 19 are not obvious in view of Rutland.

The Examiner also repeats the assertion that “Rutland does not teach away from spitting”

and that “the problems foreseen in Rutland will not prevent the present usage in the combination of references.” Answer, page 13, paragraph 2. Appellants again point out that the claims at issue require not spitting *per se*, but an arrangement of printing nozzles in which the claimed printing system and method are particularly relevant. However, such a method is not suggested in Rutland, due in part to the nozzle arrangement taught therein. Therefore, Rutland would guide one skilled in the art to an arrangement of elements quite unlike that set forth in the claims. Rather than the composition and arrangement recited in Appellants’ claims, Rutland would more likely lead one to a more conventional ink set employed with a bidirectional spitting scheme coupled with a configuration of the print cartridges. As such, the matter of claims 4 and 19 are not fairly suggested by Rutland.

In view of the above reasons and those set forth in the Appeal Brief, Appellants submit that the combination of Lin, Takahashi, and Rutland do not present a *prima facie* case of obviousness with regard to claims 4 and 19. As such, removal of the rejections based on Rutland is respectfully requested.

CONCLUSION

In light of the above, Appellants maintain that the claims at issue are patentably distinct from the asserted prior art references. Particularly, the combination of Lin in view of Takahashi, and the combination of Lin in view of Takahashi further in view of Rutland fail to teach each and every element of the present claims, within the meaning of 35 U.S.C. § 103.

Since the Patent Office has not met its initial burden of establishing a *prima facie* case of obviousness, the Appellants respectfully submit that all remaining rejections are improper, and should be overturned.

DATED this 8th day of September, 2010.

Respectfully submitted,

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